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Practitioner's Docket No. 20434-752

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Islam )  
Serial No.: Not assigned ) Group No.: Not assigned  
Filed: herewith ) Examiner: Not assigned  
For: Multi-Stage Optical Amplifier and )  
Broadband Communication System )

Assistant Commissioner for Patents  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Please take the following amendments into consideration before examination on the merits.

In the Cross Reference to Related Applications:

Please amend as follows:

-- This application is a continuation of U.S. Application Serial No. 09/471,753, filed December 23, 1999, which is a continuation-in-part of Provisional Application Serial No. 60/089,726, filed June 16, 1999, and a continuation-in-part of Application Serial No. 09/471,753, filed December 23, 1999. --

In the Claims:

Please add the following claims:

- 1 1. A multi-stage optical amplifier, comprising:
- 2 an optical fiber including a first length of Raman amplifier fiber and a second
- 3 length of Raman amplifier fiber, the optical fiber configured to be coupled to a signal
- 4 source that produces a plurality of signal wavelengths  $\lambda_s$  and a pump source that
- 5 produces one or more pump wavelengths  $\lambda_p$ , wherein the one or more pump
- 6 wavelengths  $\lambda_p$  are less than at least a portion of the plurality of signal wavelengths  $\lambda_s$ ,
- 7 at least a portion of the plurality of signal wavelengths  $\lambda_s$  of the first Raman amplifier
- 8 fiber having an optical noise figure of less than 8 dB and less than an optical noise